

REMARKS

The following remarks are in response to the Final Rejection of August 29, 2001. The application is pending by virtue of a Notice of Appeal filed on February 28, 2002 and a Request for Continued Examination and an petition for an extension of time filed herewith. Reexamination and reconsideration are respectfully requested in view of the foregoing amendments and the following remarks.

Correction of Amendments

The Examiner stated that the amendment of February 11, 2000 was not entered. Therefore, the Amendments presented herein are based on the claims as they existed following the amendments of January 21, 2000 and June 6, 2001.

Withdrawal by the Examiner of Claim 9 - 11, 14 and 28 - 29 from consideration

The Examiner stated that Claims 9 - 11, 14 and 28 - 29 were not examined, on the alleged grounds that they are improper multiple dependent claims. In response, the claims are amended to eliminate multiple dependency.

Rejection of Claims 1 - 4 and 4 under 35 U.S.C. 112, second paragraph as indefinite

Claims 1 - 4 and 4 were rejected under 35 U.S.C. 112, second paragraph as indefinite. In response, the claims are amended to overcome this rejection. In particular, the claims are amended so that the recitation of the at least one nitrogen compound is singular. The recitation of the combustion moderator in claim 1 is amended for greater clarity. In Claim 2, the term "substituted" is clarified by the recitation of specific substituents. In Claim 3, "R" is changed to R_1 and " $R_2 R_3$ " is changed to R_2 or R_3 .

Rejection of Claims 1 - 4 and 7 under 35 U.S.C. 103(a) over Blau et al, Lund et al '059, Wardle et al, Highsmith et al and Yoshida et al '446

Claims 1 - 4 and 7 under 35 U.S.C. 103(a) were rejected as obvious over Blau et al, Lund et al '059, Wardle et al, Highsmith et al and Yoshida et al '446.

This rejection is traversed, at least for the reasons provided in the amendment filed January 21, 2000, the second amendment filed February 11, 2000, and the amendment filed on June 6, 2001, which reasons are incorporated herein by reference.

Further, Claim 1 is amended to clarify that with respect to the oxidant, the gas-generating composition requires at least one representative each from three out of the four groups consisting of peroxides, nitrates, chlorates and perchlorates. In other words, this limitation is not satisfied by a composition having only three peroxides or only three nitrates, etc. This feature is not disclosed or suggested by the cited references. Although the cited references may show various oxidizers, neither Blau, Lund, Wardle, Highsmith or Yoshida show a composition wherein oxidizers from three out of four groups consisting of peroxides, nitrates, chlorates and perchlorates are all required to be present together with nitrogen-containing compound and the combustion moderators as required by the present claims.

Further, the Examiner is requested to note that the filing date of Lund and Highsmith is after the earliest priority date of the present invention.

It is submitted the Examiner has done nothing more than use hindsight reconstruction to pick and chose among isolated disclosures in the prior art to arrive at the presently claimed invention. Such is not a proper determination of the obviousness issue. Accordingly, it is submitted the presently claimed invention is patentable over the proposed combination of references.

Conclusion

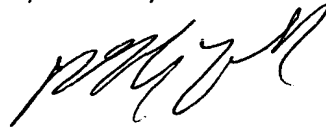
In view of the foregoing amendments and remarks, it is respectfully submitted that Claims 1 - 4, 7, 9 - 11, 14 and 28 - 29 are in condition for allowance. Favorable reconsideration is respectfully requested.

Should the Examiner believe that anything further is necessary to place this application in condition for allowance, the Examiner is requested to contact applicants' undersigned attorney at the telephone number listed below.

Kindly charge any additional fees due, or credit overpayment of fees, to Deposit Account No. 01-2135 (306.35565X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



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RTW

Attachment: Marked-up copy showing changes

MARKED-UP COPY SHOWING CHANGES MADE

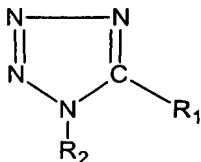
1. (Three times Amended) Gas-producing composition for gas generators, ~~comprising nitrogen-containing compounds~~, wherein said gas-producing composition comprises,

a) as at least one nitrogen-containing compound ~~compounds~~, ~~at least one compound~~ selected from the group consisting of tetrazole, triazole, triazine, cyanic acid, urea, their derivatives and their salts;

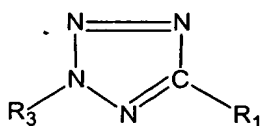
b) ~~as oxidant~~, at least three oxidant compounds selected ~~from the group including at least one representative each from three of the four groups~~ consisting of peroxides, nitrates, chlorates and perchlorates; and

c) ~~combustion moderators which are capable of influencing~~ at least one combustion moderator selected from substances that influence the combustion and its rate by heterogeneous or homogeneous catalysis.

2. (Twice Amended) Gas-producing composition according to claim 1, wherein said ~~gas-producing composition contains as nitrogen-containing compounds~~, nitrogen-containing compound is one or more tetrazole derivatives of the formula formulae IA or IB:



IA



IB

in which ~~R₁ and R₂ or R₃ can be the same or different,~~
~~with either R₂ or R₃ being present, and representing hydrogen, hydroxy, amino,~~
~~carboxyl, an alkyl radical with 1 to 7 carbon atoms, an alkenyl radical with 2 to 7 carbon~~
~~atoms, an alkylamino radical with 1 to 10 carbon atoms, an aryl radical, a substituted~~
~~aryl radical substituted with one or several substituents which can be the same or~~
~~different and are selected from an amino group, a nitro group, alkyl radicals with 1 to 4~~
~~carbon atoms or an arylamino radical in which the aryl radical is substituted, and~~
~~sodium, potassium and guanidinium salts of said tetrazole derivatives wherein R₁ and~~
R₂ or R₃ are identical or different and are hydrogen, hydroxy, amino, carboxy, an alkyl
residue of 1-7 carbon atoms, an alkenyl residue of 2-7 carbon atoms, an alkylamino
residue of 1-10 carbon atoms, an aryl residue, an arylamino residue, a substituted aryl
residue or a substituted arylamino residue, the substituted aryl residue or substituted
arylamino residue being substituted by one or several substituents which are identical or
different, and which are selected from the group consisting of an amino group, a nitro
group and an alkyl group of 1-4 carbon atoms or a sodium, a potassium or a
guanidinium salt of said tetrazole or tetrazole derivative.

3. (Twice Amended) Gas-producing composition according to claim 2,
 wherein ~~R~~ R₁, is selected from the group consisting of hydrogen, amino, hydroxy,
 carboxyl, a methyl, ethyl, propyl, isopropyl, butyl, isobutyl, tert-butyl, n-pentyl, n-hexyl,
 n-heptyl, methylamino, ethylamino, dimethylamino, n-heptylamino, n-octylamino, n-

decylamino, tetrazole, phenylamino, phenyl, nitrophenyl, and aminophenyl; and R_2 or R_3 is selected from the group consisting of hydrogen, a methyl, ethyl, phenyl, nitrophenyl, and aminophenyl radical.

4. (Twice Amended) Gas-producing composition according to claim 1, wherein the nitrogen-containing compounds are selected from the group of the tetrazole derivatives and are compound is a tetrazole derivative selected from the group consisting of compounds, 5-aminotetrazole; lithium, sodium, potassium, zinc, magnesium, strontium or calcium 5-aminotetrazolate; 5-aminotetrazole nitrate, sulphate, or perchlorate; 1-(4-aminophenyl)-tetrazole, 1-(4-nitrophenyl)-tetrazole, 1-methyl-5-dimethyl-aminotetrazole, 1-methyl-5-methylamino-tetrazole, 1-methyltetrazole, 1-phenyl-5-aminotetrazole, 1-phenyl-5-hydroxytetrazole, 1-phenyltetrazole, 2-ethyl-5-aminotetrazole, 2-methyl-5-aminotetrazole, 2-methyl-5-carboxyltetrazole, 2-methyl-5-methylaminotetrazole, 2-methyltetrazole, 2-phenyltetrazole, 5-(p-tolyl)tetrazole, 5-diallylaminotetrazole, 5-dimethylaminotetrazole, 5-ethylaminotetrazole, 5-hydroxytetrazole, 5-methyltetrazole, 5-methylaminotetrazole, 5-n-decylaminotetrazole, 5-n-heptylaminotetrazole, 5-n-octylaminotetrazole, 5-phenyltetrazole, 5-phenylaminotetrazole, bis-(aminoguanidine)-azotetrazole and diguanidinium-5,5'-azo-tetrazolate, 5,5'-bitetrazole and 5,5'-bi-1H-tetrazoleammonium compounds.

7. (Twice Amended) Gas-producing composition according to ~~any one of~~ claims 1 to 6 Claim 1, wherein said gas-producing composition contains as ~~oxidant~~ the at least three oxidant compounds a combination of zinc peroxide, potassium perchlorate ~~perchlerate~~ and at least one nitrate.

9. (Twice Amended) Gas-producing composition according to ~~any one of claims 1 to 8~~ Claim 1, wherein the ratio of the nitrogen-containing ~~compounds~~ compound to the oxidants is balanced such that on combustion of the gas-producing composition, oxygen is formed in excess.

10. (Twice Amended) Gas-producing composition according to ~~any one of claims 1 to 9~~ Claim 1, wherein ~~said gas-producing composition contains, as combustion moderators, compounds which are capable of influencing combustion and its rate by heterogeneous or homogeneous catalysis, the proportion of these compounds amounting to~~ the combustion moderator is present in an amount up to 8%.

11. (Twice Amended) Gas-producing composition according to ~~any one of claims 1 to 10~~ Claim 1, wherein ~~said gas-producing composition contains combustion moderators~~ the combustion moderator is selected from the group consisting of, metals, metal oxides, metal carbonates, metal sulphides and mixtures ~~of these combustion moderators~~ thereof.

14. (Twice Amended) Gas-producing composition according to ~~any one of claims 1 to 13~~ Claim 1, wherein said gas-producing composition further comprises an ~~addition~~ additional substance selected from the group consisting of combustion moderators, noble metals, mixtures of these compounds, basically reacting substances selected from the group consisting of oxides, hydroxides, carbonates of alkali and alkaline earth metals, zinc, mixtures of these compounds, urea, guanidine compounds having NH₂ groups selected from the group consisting of amidosulphonic acids, amido complexes, amides, and mixtures of these compounds.